AMENDMENTS

Applicant requests that the Examiner enter the following amendments:

IN THE CLAIMS:

Please amend the following claims:

1. (Currently amended) A method for detecting~~, diagnosing, evaluating or monitoring cancer or premalignant disease in a human wherein said cancer or premalignant disease comprises neoplastic cells that express or over-express~~ one or more species of RNA that is epidermal growth factor RNA, epidermal growth factor receptor RNA, her-2/neu RNA, c-myc RNA, or heterogeneous nuclear ribonucleoprotein A2/B1 RNA in human blood plasma or serum, the method comprising the steps of:

   a) extracting total extracellular RNA from ~~a non-cellular fraction of~~ human blood plasma or serum ~~from a human~~, wherein a fraction of said extracted RNA comprises one or more RNA species that is epidermal growth factor RNA, epidermal growth factor receptor RNA, her-2/neu RNA, c-myc RNA, or heterogeneous nuclear ribonucleoprotein A2/B1 RNA~~, or any combination thereof~~;

   b) amplifying or signal amplifying said fraction of the extracted RNA or cDNA prepared therefrom, either qualitatively or quantitatively, using primers or probes specific for said RNA species to produce an amplified product or using labeled primers or probes specific for said RNA species to produce an amplified signal; and

   c) detecting either quantitatively or qualitatively the amplified product or amplified signal

   ~~wherein cancer or premalignant disease comprising neoplastic cells that express or over-express one or more RNA species that is epidermal growth factor RNA, epidermal growth factor receptor RNA, her-2/neu RNA, c-myc RNA and heterogeneous nuclear ribonucleoprotein A2/B1 RNA is detected, diagnosed, evaluated or monitored~~.

2. (Cancelled)

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3. (Currently amended) A method for ~~extracting an~~ hybridizing her-2/neu RNA ~~species~~ from ~~a non-cellular fraction of~~ blood plasma or serum from a human with breast cancer, or cDNA produced therefrom, using a probe that hybridizes with ~~said RNA species, wherein the RNA species is epidermal growth factor RNA,~~ her-2/neu RNA, or cDNA produced therefrom ~~heterogeneous nuclear ribonucleoprotein A2/B1 RNA~~.

4. (Cancelled)

5. (Withdrawn) A method for selecting a human or animal for an epidermal growth factor receptor-directed therapy, the method comprising the step of assaying quantitatively or qualitatively a non-cellular fraction of a bodily fluid of the human or animal for epidermal growth factor receptor RNA or cDNA or epidermal growth factor RNA or cDNA, wherein the human or animal is selected for an epidermal growth factor receptor-directed therapy when said RNA or cDNA is detected by the assay.

6. (Withdrawn) A method according to claim 5 wherein the non-cellular fraction of a bodily fluid is blood plasma or serum.

7. (Withdrawn) The method of claim 5, wherein the therapy is a monoclonal antibody therapy.

8. (Withdrawn) A method for monitoring response in a human or animal to an epidermal growth factor receptor-directed therapy, the method comprising the step of assaying quantitatively or qualitatively a non-cellular fraction of a bodily fluid of the human or animal for epidermal growth factor receptor RNA or cDNA or epidermal growth factor RNA or cDNA, wherein a response to said therapy is monitored by detecting said RNA or cDNA.

9. (Withdrawn) A method according to claim 8 wherein the non-cellular fraction of a bodily fluid is blood plasma or serum.

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10. (Withdrawn) The method of claim 8, wherein the therapy is a monoclonal antibody therapy.

11. (Currently amended) A method for ~~selecting~~ evaluating a human having cancer for a her2/neu-directed therapy ~~a human or animal having cancer that over-expresses her-2/neu~~, the method comprising the step of assaying quantitatively or qualitatively ~~a non-cellular fraction of~~ blood plasma or serum from the human ~~or animal~~ for her-2/neu RNA ~~or cDNA, wherein the human or animal is selected for a her2/neu-directed therapy when said RNA or cDNA is detected in the non-cellular fraction of blood~~.

12. (Cancelled)

13. (Original) The method of claim 11, wherein the therapy is a monoclonal antibody therapy.

14. (Currently amended) A method for monitoring response in a human with breast cancer ~~or animal~~ to a her2/neu-directed therapy, the method comprising the step of assaying quantitatively or qualitatively ~~a non-cellular fraction of~~ blood plasma or serum from the human with breast cancer receiving a her-2/neu directed therapy ~~or animal~~ for her2/neu RNA or cDNA in a serial fashion, wherein a response to said her2-neu-directed therapy is monitored by detecting said RNA or cDNA serially and detecting response to said therapy when a decreased amount of her-2/neu RNA is detected.

15. (Cancelled)

16. (Original) The method of claim 14, wherein the therapy is a monoclonal antibody therapy.

17. (Withdrawn) A method for selecting a human or animal for a tyrosine kinase-directed therapy, the method comprising the step of assaying quantitatively or qualitatively a non-cellular fraction of a bodily fluid of the human or animal for epidermal growth factor

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receptor RNA or cDNA or epidermal growth factor RNA or cDNA, wherein the human or animal is selected for a tyrosine kinase-directed therapy when said RNA or cDNA is detected by the assay.

18. (Withdrawn) A method according to claim 17 wherein the non-cellular fraction of a bodily fluid is blood plasma or serum.

19. (Withdrawn) The method of claim 17, wherein the therapy is a tyrosine kinase inhibitor, monoclonal antibody, small molecule, vaccine, or anti-sense therapy.

20. (Withdrawn) A method for monitoring response in a human or animal to a tyrosine kinase-directed therapy, the method comprising the step of assaying quantitatively or qualitatively a non-cellular fraction of a bodily fluid of the human or animal for epidermal growth factor receptor RNA or cDNA or epidermal growth factor RNA or cDNA, wherein a response to said tyrosine kinase-directed therapy is monitored by detecting said RNA or cDNA.

21. (Withdrawn) A method according to claim 20 wherein the non-cellular fraction of a bodily fluid is blood plasma or serum.

22. (Withdrawn) The method of claim 20, wherein the therapy is a tyrosine kinase inhibitor, monoclonal antibody, small molecule, vaccine, or anti-sense therapy.

23. (Withdrawn) A kit for selecting a human or animal for a therapy according to the method of claim 5, wherein said kit comprises primers or probes specific for said epidermal growth factor receptor RNA or epidermal growth factor RNA species.

24. (Withdrawn) A kit for monitoring tumor response in a human or animal according to the method of claim 8, wherein said kit comprises primers or probes specific for said epidermal growth factor receptor RNA or epidermal growth factor RNA species.

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25. (Withdrawn) A kit for selecting a human or animal for a therapy according to the method of claim 11, wherein said kit comprises primers or probes specific for said her2/neu RNA species.

26. (Withdrawn) A kit for monitoring tumor response in a human or animal according to the method of claim 14, wherein said kit comprises primers or probes specific for said her2/neu RNA species.

27. (Withdrawn) A kit for selecting a human or animal for a therapy according to the method of claim 17, wherein said kit comprises primers or probes specific for said tyrosine kinase RNA species.

28. (Withdrawn) A kit for monitoring tumor response in a human or animal according to the method of claim 20, wherein said kit comprises primers or probes specific for said tyrosine kinase RNA species.

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